

REMARKS/ARGUMENTS

The Office action mailed on May 10, 2005 has been carefully reviewed and the above identified amendments have been provided to thoroughly address each of the objections and rejections provided by the examiner in that Office action. In addition, the following remarks are submitted to clarify and explain the importance of the above amendments and to support a finding by the examiner that the claims, as amended, are now in a form warranting allowance of this case. Accordingly, the undersigned respectfully requests reconsideration by the examiner in this case.

At the outset, applicant notes that claims 5-10 and 12-14 currently stand allowed. These claims have been left unmodified and thus should maintain their allowed status.

Claims 11 and 15-17 had been rejected under 35 U.S.C. §§102 and 103 based on the teachings of Arnoldi, Fessenden and Lee, either alone or in combination with each other. Applicant has chosen to cancel these rejected claims to overcome this rejection.

Applicant has additionally provided new claims 18-26 for the examiner's kind consideration. These new claims have been carefully crafted to include limitations not taught by Fessenden, Lee or Arnoldi, either when considered alone or in any conceivable combination. Accordingly, these claims should be in a form warranting allowable status.

In particular, and with regard to independent claim 18, applicant notes that, among other things, new claim 18 requires that the gas release holes be in tube segments which are "adapted to be held stationary." Applicant notes that the patent to Lee teaches a method for "multiple suppression" based on phased arrays. Lee teaches use of a towable array which can be used for geological prospecting and which beneficially suppresses "multiples" so that data obtained can have a higher quality. Lee specifically teaches that the sources 104 and receivers 105, as well as a bubble diffuser 101 are attached to a towing vessel 106, such as through use of a towing line 107 (column 4, lines 37-67). Hence, Lee does not teach tube segments with holes for release of gas

which are adapted to be held stationary.

Similarly, Fessenden teaches adapting a hull of a vessel to release bubbles therefrom for sound insulation. Such a vessel is inherently a vehicle adapted to move rather than to be held stationary, such that any associated tube segments with holes for release of gas would not be "adapted to be held stationary," as required by new claim 18. While Arnoldi does teach stationary holes for release of a gas underwater, no vertical spacing of two separate tube segments or associated holes are described.

This is not a trivial distinction lacking in real world significance. Rather, when sound suppression is required at a stationary location, such as surrounding a construction site, the tube segments with holes for release of gas must be capable of being positioned precisely where required and then held stationary to achieve the desired energy dampening at the precise location required. Mobile platforms are inherently unable to perform such a function. Accordingly, new claim 18 is distinct from the prior art of record in this case and is believed to warrant allowable status.

Dependent claims 19-23 include the requirements of claim 18 as well as additional limitations which make these dependent claims even more distinct from the teachings of the prior art. In particular, dependent claim 19 includes requirements that allow bubbles released from the lower tube segment to travel to the location of the second tube segment, except when disruptive forces such as water currents influence bubble travel. Claim 19 is thus directed to a system where a form of redundant bubble co-location would be provided except when currents exist which would cause the bubbles to travel laterally somewhat.

Such vertical alignment is not taught by Arnoldi, Fessenden or Lee in any form. Rather, Arnoldi teaches only horizontal arrays of gas release holes without any vertical spacing. Fessenden teaches multiple holes which are spaced from each other both laterally and vertically. No benefit would be provided in a device such as Fessenden if it were modified to have the holes spaced vertically from each other. Hence, there would

be no motivation to modify Fessenden to exhibit such vertical alignment as required by new claim 19. Also, Lee's bubble system for multiple suppression in geological prospecting does not include any such vertical offset and Lee would have no motivation to do so.

With the invention of this application it is important that such redundancy be provided. In particular, when currents are encountered, the bubbles released from a lower tube segment tend to travel laterally as the bubbles rise, so that the bubbles are moved out of position. When it is desirable to maintain a substantially complete energy dampening curtain surrounding a particular region, it is important that such redundancy be initially provided so that once current effects cause the bubbles to move laterally, a substantially complete "enclosure" of bubbles is still maintained.

With regard to claim 20, a vertically extending spine is required. None of the prior art of record in this case includes such a vertically extending elongate spine. Rather, Fessenden teaches a hull which extends a mixture of laterally and vertically and which is certainly not "elongate." Lee fails to teach any such vertically extending elongate spine, as well as Arnoldi. Accordingly, dependent claim 20 is distinct from the teachings of the prior art.

With regard to new claim 23, tube segments are required which are arcuate and extend circumferentially around a cylindrical region. These requirements of dependent claim 23 in conjunction with the requirements of claim 18 allow for a substantially complete energy dampening enclosure to be provided, which is not taught by any of the prior art of record in this case, either alone or in any combination.

Accordingly, new claims 18-23 should now be in a form warranting allowable status.

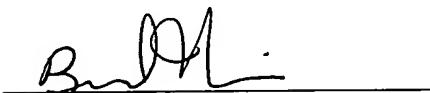
New claim 24 is similar to new claim 18, except that this independent claim has been somewhat simplified and has been amended to include requirements analogous to those discussed above with respect to claim 19. As discussed above with respect to

claim 19, the prior art of record in this case fails to disclose holes for release of gas which are spaced from each other vertically in a way such that when water currents or other forces are not acting on bubbles released from the holes, that the lower hole causes bubbles to pass to the position of the upper hole.

Dependent claims 25 and 26 are generally similar to dependent claims 20 and 23. Rather than belabor the record, applicant merely states that for reasons specified above with respect to claims 18-23, new claims 24-26 should also be in a form warranting allowable status.

In view of the foregoing, it is respectfully requested that the examiner pass this case to issue. If, upon consideration, the examiner believes further issues remain outstanding or new ones have been generated, the undersigned requests that the examiner call the undersigned to set up a personal or telephone interview with the undersigned to resolve any such remaining issues.

Respectfully Submitted:



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Bradley P. Heisler
Applicant's Attorney
Telephone (916) 781-6634
Registration No.: 35,892

Date